

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-14: (Withdrawn)

15. (Original) A fluid ejecting device comprising:

a silicon substrate having a <100> crystalline orientation;

a plurality of fluid drop generators formed on a first surface of said silicon substrate;

a fluid feed slot extending from a second surface of said silicon substrate to said first surface;

said fluid slot formed by deep reactive ion etching followed by anisotropic wet etching, and having an opening at the first surface having a width W1 that is less than a width W2 of an opening at the second surface.

16. (Original) The fluid ejecting device of claim 15 wherein W1 is about 100 micrometers or less.

17. (Original) The fluid ejecting device of claim 15 wherein W2 is about 300 micrometers or less.

18. (Original) An ink jet printing device comprising:

a silicon substrate having a <100> crystalline orientation;

a plurality of ink drop generators formed on a first surface of said silicon substrate;

an ink feed slot extending from a second surface of said silicon substrate to said first surface;

said ink feed slot formed by deep reactive ion etching followed by anisotropic wet etching, and having an opening at the first surface having a width W1 that is less than a width W2 of an opening at the second surface.

19. (Original) The ink jet printhead of claim 18 wherein W1 is about 100 micrometers or less.

20. (Original) The ink jet printhead of claim 18 wherein W2 is about 300 micrometers or less.

21. (Previously Presented) The fluid ejecting device of Claim 15, wherein the fluid feed slot has a diamond shape.

22. (Previously Presented) The fluid ejecting device of Claim 15, wherein the fluid feed slot has a width at a location intermediate the first surface and the second surface which is larger than width W1.

23. (Previously Presented) The fluid ejecting device of Claim 15, wherein a longitudinal extent of the fluid feed slot is aligned with a <100> plane of the substrate.

24. (Previously Presented) The ink jet printing device of Claim 18, wherein the ink feed slot has a diamond shape.

25. (Previously Presented) The ink jet printing device of Claim 18, wherein the ink feed slot has a width at a location intermediate the first surface and the second surface which is larger than width W1.

26. (Previously Presented) The ink jet printing device of Claim 18, wherein a longitudinal extent of the ink feed slot is aligned with a <100> plane of the substrate.

27. (Previously Presented) A fluid ejecting device comprising:

a silicon substrate having a $\langle 100 \rangle$ crystalline orientation;

a plurality of fluid drop generators formed on a first surface of said silicon substrate;

a fluid feed slot extending from a second surface of said silicon substrate to said first surface;

said fluid slot formed by deep reactive ion etching followed by anisotropic wet etching, and having an opening at the first surface having a width W_1 that is less than a width W_2 of an opening at the second surface, said fluid slot tapering from said opening at said second surface to an internal width that is larger than the width W_2 at an intermediate location between said first and second surface, the fluid slot tapering from said internal width to the width W_1 at said opening in said first surface.

28. (Previously Presented) A fluid ejecting device comprising:

a silicon substrate having a $\langle 100 \rangle$ crystalline orientation;

a plurality of fluid drop generators formed on a first surface of said silicon substrate;

a fluid feed slot extending from a second surface of said silicon substrate to said first surface;

said fluid slot formed by deep reactive ion etching the second surface of the silicon substrate followed by anisotropic wet etching, and having an opening at the first surface having a width W_1 that is less than a width W_2 of an opening at the second surface.

29. (Previously Presented) A fluid ejecting device comprising:

a silicon substrate having a $\langle 100 \rangle$ crystalline orientation;

a plurality of fluid drop generators formed on a first surface of said silicon substrate;

a fluid feed slot extending from a second surface of said silicon substrate to said first surface;

said fluid slot formed by deep reactive ion etching the second surface of the silicon substrate to form a partial fluid slot that does not extend to the first surface followed by anisotropic wet etching the partial fluid slot, and having an opening at the first surface having a width W1 that is less than a width W2 of an opening at the second surface.

30. (Previously Presented) A fluid ejecting device comprising:
a silicon substrate having a <100> crystalline orientation;
a plurality of fluid drop generators formed on a first surface of said silicon substrate;
a fluid feed slot extending from a second surface of said silicon substrate to said first surface;
said fluid slot formed by deep reactive ion etching to a depth of at least one-half a thickness of the silicon substrate followed by anisotropic wet etching, and having an opening at the first surface having a width W1 that is less than a width W2 of an opening at the second surface.

31. (New) The fluid ejecting device of claim 15 wherein:
W1 is about 100 micrometers or less; and
W2 is about 300 micrometers or less.

32. (New) The fluid ejecting device of claim 15 wherein said fluid feed slot was formed by deep reactive ion etching to a depth of at least one-half of a thickness of the substrate.

33. (New) The fluid ejecting device of claim 15 wherein said fluid feed slot was formed by deep reactive ion etching to a depth of at least about 475 micrometers.

34. (New) The fluid ejecting device of claim 15 wherein the substrate has a thickness of about 675 micrometers or less.

35. (New) The fluid ejecting device of claim 34 wherein said fluid feed slot was formed by deep reactive ion etching to a depth of at least one-half of a thickness of the substrate.

36. (New) The fluid ejecting device of claim 34 wherein said fluid feed slot was formed by deep reactive ion etching to a depth of at least about 475 micrometers.

37. (New) The fluid ejecting device of claim 35 wherein:

W1 is about 100 micrometers; and

W2 is about 300 micrometers.

38. (New) The fluid ejecting device of claim 15 wherein:

the substrate has a thickness STH;

said fluid feed slot was formed by deep reactive ion etching to a depth DD, with an angle of re-entrancy α ; and

W1 equals about $W2 + 2(DD \cdot \tan \alpha + (DD - STH / \tan(54.7 \text{deg.})))$.

39. (New) The fluid ejecting device of claim 38 wherein said fluid feed slot was formed by deep reactive ion etching to a depth of at least one-half of a thickness of the substrate.

40. (New) The fluid ejecting device of claim 38 wherein W1 is about 100 micrometers or less.

41. (New) The fluid ejecting device of claim 38 wherein W2 is about 300 micrometers or less.

42. (New) The fluid ejecting device of claim 38 wherein:

W1 is about 100 micrometers or less; and

W2 is about 300 micrometers or less.

43. (New) The fluid ejecting device of claim 38 wherein said angle of re-entrancy α is about 5 deg.

44. (New) A fluid ejecting device comprising:

a silicon substrate having a $\langle 100 \rangle$ crystalline orientation and a thickness STH;

a plurality of fluid drop generators formed on a first surface of said silicon substrate;

a fluid feed slot extending from a second surface of said silicon substrate to said first surface;

said fluid slot being formed at least in part by deep reactive ion etching to a depth DD, with an angle of re-entrancy α , and having an opening at the first surface having a width W1 that is less than a width W2 of an opening at the second surface, wherein $W1$ equals about $W2 + 2(DD \cdot \tan \alpha + (DD - STH / \tan(54.7 \text{deg})))$.

45. (New) The fluid ejecting device of claim 44 wherein said angle of re-entrancy α is about 5 deg.

46. (New) The fluid ejecting device of claim 44, wherein DD is more than one half of STH.

47. (New) The fluid ejecting device of claim 44 wherein W1 is about 100 micrometers or less.

48. (New) The fluid ejecting device of claim 44 wherein W2 is about 300 micrometers or less.

49. (New) The fluid ejecting device of claim 44 wherein W1 is about 100 micrometers or less and W2 is about 300 micrometers or less.